REMARKS

Entry of the above-noted amendments, reconsideration of the application, and allowance of all claims pending are respectfully requested. By this amendment, claims 1, 8, 15, and 20 are amended. These amendments to the claims constitute a bona fide attempt by Applicants to advance prosecution of the application and obtain allowance of certain claims, and are in no way meant to acquiesce to the substance of the rejections. It is believed that the amendments made herein place the entire application in condition for allowance and/or better form for appeal. These amendments were not made earlier because the claims as previously submitted were believed to be in condition for allowance. Applicants submit no new search is required in view of the results of the search conducted in the outstanding Office Action. Support for the amendments can be found throughout the specification, figures (FIG. 6), and claims and thus, no new matter has been added. Claims 1-9, 12-15 and 18-25 are pending.

Claim Rejections - 35 U.S.C. §§ 102 and 103:

In the Final Office Action mailed November 10, 2005 the Examiner rejected claims 1-5, 7-9, 12-14, 20-22, 24, and 25 under 35 U.S.C. 12(b) as being anticipated by Possin et al. (USP 5,430,298; "Possin"). The Examiner next rejected claims 6 and 23 under 35 U.S.C. §103(a) as being unpatentable over Possin et al. as applied to claims 1 and 20 above, and further in view of Mattson et al. (USP 6,553,092; "Mattson"). Claims 15 and 19 are rejected under 35 U.S.C. §103(a) as being unpatentable over Mattson in view of Possin. Claim 18 is rejected under 35 U.S.C. §103(a) as being unpatentable over Mattson and Possin as applied to claim 15 above, and further in view of Rushbrooke et al. (USP 5,682,411; "Rushbrooke"). These rejections are respectfully, but most strenuously, traversed.

It is well-settled that there is no anticipation unless (1) all the same elements are (2) found in exactly the same situation and (3) are united in the same way to (4) perform the identical function. Since the Office Action's citations to each of the applied references is missing at least one element of each of Applicants' independent claims, Applicants respectfully submit that the claimed invention is not anticipated by the Office Action's citations to the applied references, as further discussed below.

For explanatory purposes, Applicants discuss herein one or more differences between the Office Action's citations to the applied references and the claimed invention with reference to one

or more parts of the applied references. This discussion, however, is in no way meant to acquiesce in any characterization that one or more parts of the Office Action's citations to the applied references correspond to the claimed invention.

Applicants respectfully submit that the Office Action's citations to the applied references do not teach or suggest one or more elements of the claimed invention. A careful reading of the Office Action's citations to the applied references fails to teach or suggest, for example, the optical mask arranged along the third plane parallel to the first and the second planes, and disposed between the scintillator array and the photodiode array, the optical mask configured to reduce optical transference between the scintillator and the neighboring photodiode, the optical mask located closer to the scintillator array than the photodiode array, as recited in Applicants' independent claim 1.

Possin discloses (column 5, line 66, to column 6, line 2; column 6, lines 53-58; column 6, line 64 to column 7, line 20; FIG. 1) boundary light barrier 180:

> In accordance with this invention, pixel boundary light barrier 180 is disposed on first surface 131 of photosensor block 130 so as to overlie the region of photosensor array 120 between respective fully photoactive regions of adjoining pixels 125.
>
> ...
>
> Pixel boundary light barrier 180 is disposed in optical coupling layer, that is, it is disposed on first surface 131 of photosensor array 120 and is otherwise surrounded by optical coupling layer 170, which typically comprises a light transmissive material such as a thermally stable polymer, an epoxy, or the like....
>
> Optical coupling layer 170 and pixel boundary light barrier 180 are typically formed in the following manner. Light barrier is first formed, for example by spinning the polyimide/dye mixture on over first surface 131; after curing, the opaque polyimide/dye material is patterned using photolithographic processes (that can provide high resolution (e.g., <5 .mu.m) resolution) to provide the desired dimensions of segments 182 (FIG. 2) so as to have the light barrier disposed on first surface 131 overlying the areas between the fully photoactive regions of adjoining photodiodes and over switching elements.
>
> In one embodiment of the invention, a channel 184 is disposed in at least one of the segments 182 surrounding each pixel 125 so as to allow fluid communication between the first surface areas overlying the fully photoactive regions of adjoining pixels 125. Optical coupling layer 170 is then deposited, such as UV light curable epoxy. The uncured epoxy is in a fluid state and thus extends over pixels 125 and around light barrier 180; channels 184 assist in the equal distribution of the liquid polyimide between pixels 125 and thus the formation of an optical coupling layer that covers light barrier 180 and is substantially planar. After the optically transparent epoxy is cured using UV illumination, scintillator 110 is formed thereover.

The pixel boundary light barrier 180 is disposed on first surface 131 of photosensor array 120. The pixel boundary light barrier 180 fails to disclose the pixel boundary light barrier 180 located closer to the scintillator 110 than the photosensor array 120. Simply missing from the Office Action's citation to Possin is any mention of the optical mask arranged along the third plane parallel to the first and the second planes, and disposed between the scintillator array and the photodiode array, the optical mask configured to reduce optical transference between the scintillator and the neighboring photodiode, the optical mask located closer to the scintillator array than the photodiode array, as recited in Applicants' independent claim 1.

So, the Office Action's citation to Possin fails to satisfy at least one of the limitations recited in Applicants' independent claim 1.

The shortcomings of the Office Action's citation to Possin relative to certain elements of the claimed invention have been discussed above. The Office Action proposes a combination of the citation to Possin with a citation to Mattson. However, the Office Action's citation to Mattson does not overcome the deficiency of the Office Action's citation to Possin. Applicants respectfully submit that the proposed combination of the Office Action's citation to Possin with the Office Action's citation to Mattson fails to provide the required configuration, assuming, *arguendo*, that the combination of the Office Action's citation to Possin with the Office Action's citation to Mattson is proper.

Mattson discloses a radiographic detector having scintillation elements and photodiode elements. The scintillation elements and the photodiode elements are arranged in layers parallel to one another. Mattson fails to disclose an optical mask layer sandwiched between the scintillator and photodiode layers as recited in Applicants' independent claim 1. Mattson discloses "anti-scatter grid elements" that are arranged vertically, i.e., parallel to the path of x-ray incidence, between adjacent scintillators (e.g., Figs. 6, 6A, and 6B of Mattson). Simply missing from the Office Action's citation to Mattson is any mention of the optical mask arranged along the third plane parallel to the first and the second planes, and disposed between the scintillator array and the photodiode array, the optical mask configured to reduce optical transference between the scintillator and the neighboring photodiode, the optical mask located closer to the scintillator array than the photodiode array, as recited in Applicants' independent claim 1.

So, the Office Action's citation to Mattson fails to satisfy at least one of the limitations recited in Applicants' independent claim 1.

The shortcomings of the Office Action's citations to Possin and Mattson relative to certain elements of the claimed invention have been discussed above. The Office Action

proposes a combination of the citations to Possin and Mattson with a citation to Rushbrooke. However, the Office Action's citation to Rushbrooke does not overcome the deficiency of the Office Action's citations to Possin and Mattson. Applicants respectfully submit that the proposed combination of the Office Action's citations to Possin and Mattson with the Office Action's citation to Rushbrooke fails to provide the required configuration, assuming, *arguendo*, that the combination of the Office Action's citations to Possin and Mattson with the Office Action's citation to Rushbrooke is proper.

The Office Action's provides the following citation to Rushbrooke:

> Rushbrooke et al. teaches silicon (col. 2, lines 12-17).

The Office Action's citation to Rushbrooke, assuming, *arguendo*, it is correct, on its face fails to disclose, *inter alia*, the optical mask arranged along the third plane parallel to the first and the second planes, and disposed between the scintillator array and the photodiode array, the optical mask configured to reduce optical transference between the scintillator and the neighboring photodiode, the optical mask located closer to the scintillator array than the photodiode array, as recited in Applicants' independent claim 1.

So, the Office Action's citation to Rushbrooke fails to satisfy at least one of the limitations recited in Applicants' independent claim 1.

The Office Action's citations to Possin, Mattson, and Rushbrooke all fail to meet at least one of Applicants' claimed features. For example, there is no teaching or suggestion in the Office Action's citations to Possin, Mattson, and Rushbrooke of the optical mask arranged along the third plane parallel to the first and the second planes, and disposed between the scintillator array and the photodiode array, the optical mask configured to reduce optical transference between the scintillator and the neighboring photodiode, the optical mask located closer to the scintillator array than the photodiode array, as recited in Applicants' independent claim 1.

Furthermore, the Office Action does not allege that the art of record provides any teaching, suggestion, or incentive for modifying the citations to Possin, Mattson, and/or Rushbrooke to provide the claimed configuration.

For the reasons presented above with reference to claim 1, claims 1, 8, 15, and 20 are believed neither anticipated nor obvious over the art of record. The corresponding dependent claims are believed allowable for the same reasons as independent claims 1, 8, 15, and 20, as well as for their own additional characterizations.

Withdrawal of the §§ 102 and 103 rejections is therefore respectfully requested.

Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1-9, 12-15 and 18-25.

Applicant hereby authorizes charging of deposit account no. 07-0845 for any additional fees associated with entering the aforementioned claims.

Applicant appreciates the Examiner's consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,

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